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ABSTRACT

Presented is a guide for helping elementary school students become aware of the litter problem, acquire litter control skills, and develop an anti-litter ethic. The manual contains a hierarchy of learning objectives, a pretest/posttest instrument, background information on litter, and 12 lessons designed to promote attainment of the learning objectives. Each lesson includes brief outlines of content, instructional activities, and assessment tasks. A glossary, several supplementary learning activities, and a list of additional resources comprise the appendix. (WB)

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Environmental Education Supplementary Instructional Guide,

# ELEMENTARY LEVEL

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# The Litter Problem

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## FOREWORD

One of the most persistent and frustrating pollution problems of cities and states across our nation is litter. In 1977 the Legislature asserted in The State Litter Control Law, Act 2 "that the visual appearance of much of our State is blighted by the presence of litter."

Litter is an environmental problem of social origin. Both at work and at play, humans produce an alarming amount of litter, and the amount of litter produced seems to be on an increase. Efforts must be made to control and reduce litter. Systems of litter control and reduction must be implemented where none exists, while existing systems are vigorously maintained.

Litter control systems, however, will not cure the litter problem unless people understand their functions and uses and make positive commitments to utilize these systems to reduce and control litter. The State anti-litter slogan, "Lend A Hand To Clean Our Land," must reflect the belief by every person in our State that we are individually responsible for contributing to the reduction of litter.

The intent of this instructional guide is to help teachers make students in the public schools of Hawaii aware of the urgent need to control and reduce litter, to help them develop the necessary skills to solve the litter problem and to instill in them the anti-litter ethic.

Charles G. Clark, Superintendent



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JAN 2 6 1981

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# Chapter I

## INTRODUCTION

Since the late 1960's, there has been a growing awareness of the problem of litter across our nation. This awareness has prompted research into the causes of the litter problem and possible solutions to it. Results of this research have been used by many communities and states to initiate the necessary actions to solve the litter problem.

During 1971 and 1972, researchers, sponsored by the United States Brewers Association, conducted litter surveys in 105 cities of different population categories in 17 states comprising almost half of the nation's total population. They pinpointed three things that generally had been unknown or unrecognized about litter that could be applied to both urban and rural situations.

First, it was found that litter comes from seven sources, not just the two--pedestrians and motorists--at whom most litter control efforts have been directed. The other five that were found are household refuse, commercial refuse, loading and unloading operations, uncovered trucks, and construction projects. It was discovered that these five accounted for more of the litter total than pedestrians and motorists combined.

Second, the surveys found that litter has dynamics. Wind, water, traffic and animals cause it to spread in all directions from its point of origin.

And third, it was observed that more than 75 percent of the litter in constant evidence in the average community was trapped at such locations as fence and wall bases, grassy and planted areas, catch basins, embankments and similar lodging places.

It was clear from these findings that controlling and reducing litter called for a systematic approach that would take into consideration all of the above factors. The State of Hawaii is developing such an approach and schools are an essential part of it.

In formulating ways of involving schools in reducing and controlling litter, it has been possible to draw from an in-depth study of school children and litter control that was made in the Bridgeport Public Schools, Bridgeport, Connecticut, during the early 1970's. The most significant findings and observations that came from this research can be summarized as follows:

1. "One out of five young persons is not concerned about community appearance." This indicates a need for greater emphasis on the desirability of clean surroundings over littered surroundings.

2. "Children in elementary grades are the most responsive to initial basic education on litter control. This response declines progressively through junior high school and high school." This suggests the need for developing the right attitudes and practices in the early grades and working to preserve them as students go through the higher grades.

3. "In litter control education, children learn more by doing than by listening." This indicates that greater results will be achieved if along with oral instruction there is emphasis on participation.

These findings and observations brought into focus the potential of a two-part approach:

1. Making sanitation related to litter a curriculum component beginning with the basics in the lower grades and building to increase the levels of sophistication in the higher grades; and:

2. Supplementing the curriculum component with participation projects.

This instructional guide initiates this two-part approach as the school system's contribution to the present statewide effort to curb the proliferation of litter. It is expected that classroom and support personnel will find imaginative ways to use its ideas and suggestions.

## SUGGESTIONS FOR USE OF THIS GUIDE

This guide was developed as a part of the Department's Environmental Education Program.* Since environmental education is thematic in nature weaving through such subjects as science, social studies, mathematics, language and fine arts, health, physical education, and practical and industrial arts, materials in this guide may be infused into any of these subject areas. Possibly the best approach for use of this material is to integrate the material into several subject areas where appropriate. Where subjects are departmentalized, this guide could provide a vehicle for integrating several subjects and developing an interdisciplinary approach which reinforces the relevancy of the material learned by the student.

It is recommended, but not essential, that this material be presented in conjunction with a school, community, or state cleanup campaign to enhance the development of the students' commitment to improving their environment.

## ORGANIZATION OF THIS GUIDE

The guide is organized into four chapters and an appendix. The first three chapters of the guide contain introductory and background material to give teachers a clear picture of the litter problem and to outline the steps for development of students' knowledge of the problem. The fourth chapter contains a set of instructional guidelines to help teachers implement actual classroom instruction on the problem. The appendix of this guide contains a glossary of terms used in litter control, activities which may be used to supplement classroom instruction, and supplementary information which may be useful in conducting the activities in this guide.

*Consult other Environmental Education Program documents--A Framework for Environmental Education in the Public Schools of Hawaii and Environmental Education K-12 Curriculum Guide for program information.

## Chapter II

## LEARNING OBJECTIVES

This Chapter sets forth a set of twelve learning objectives which are to be developed in the guide. These objectives which are based on material found in Chapter III are arranged in a hierarchy. This hierarchy begins with objective number one dealing with the definition of the term litter and continues through development of a greater understanding of the litter problem to ultimate objective number twelve of controlling and reducing the causes and spread of litter.

The learning objectives in the guide contribute to student attainment of the performance expectations (PE's) listed in Student Performance Expectations of the Foundation Program and the Environmental Education K-12 Curriculum Guide. While it is not feasible to list all the PE's which are represented by the learning objectives in this guide, the major PE's related to the objectives are:

Grade 3 - Cites examples of local environmental problems.

Explains the need for rules to protect the environment.

Grade 6 - Identifies causes of local environmental problems.

Identifies state and federal governmental agencies primarily concerned with environmental management or control.

Teachers should note that the learning objectives contribute to many other PE's as well as those listed.

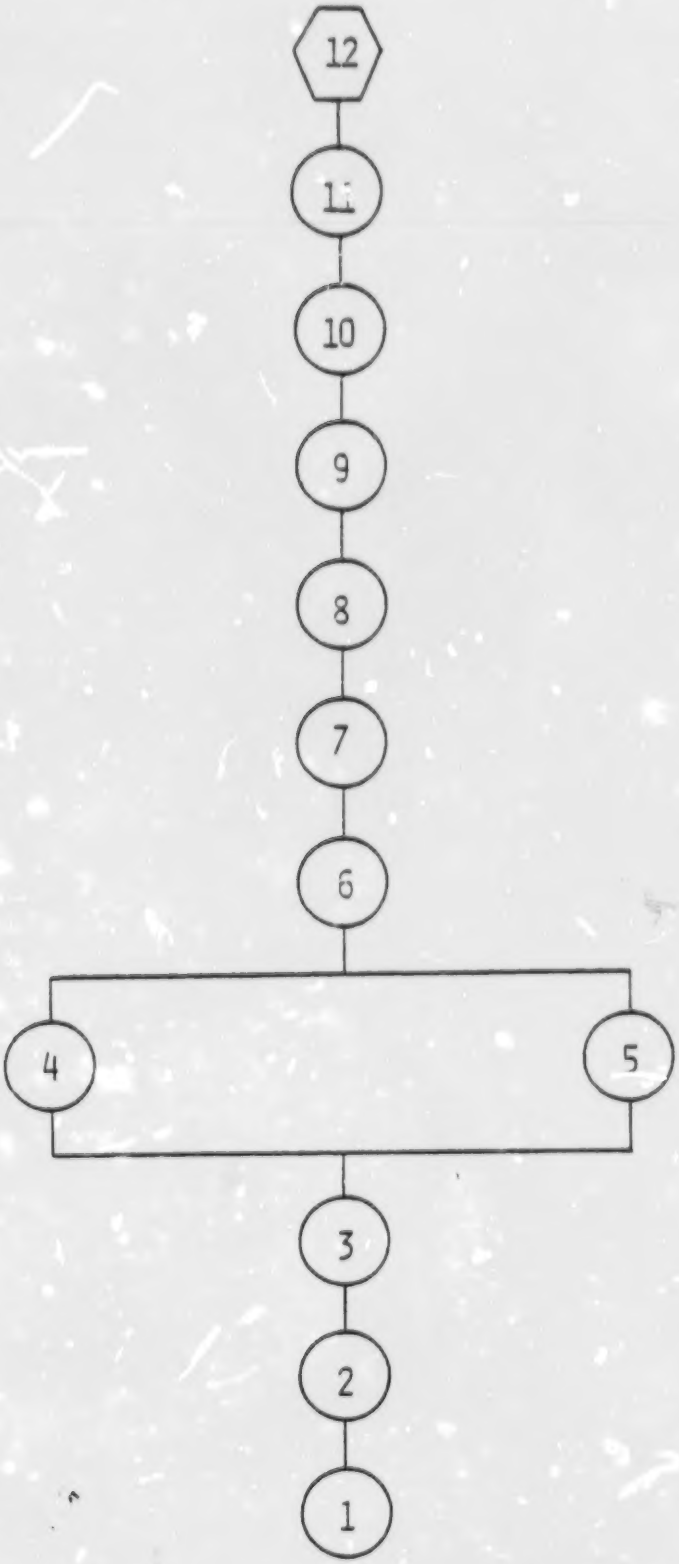
Also included in this Chapter is a pre- and post-test. This test has been provided to aid teachers in assessing students' knowledge of the litter problem prior to instruction and in evaluating students' achievement of the learning objectives after instruction.

## LEARNING OBJECTIVES

1. The student will be able to identify, state orally, or write a definition for the term litter.
2. The student will be able to name five different types of materials that become litter.
3. The student will be able to identify five sources of litter.
4. The student will be able to identify four elements that cause litter to move from place to place.
5. The student will be able to describe five locations where litter gets trapped.
6. The student will be able to state five reasons why people litter.
7. The student will be able to name two hazards of litter.
8. The student will be able to list and describe three actions necessary for the control of litter.
9. The student will be able to list and describe the responsibilities and functions of four litter control agencies in Hawaii.
10. The student will be able to identify and describe four state or local regulations for the control of litter in Hawaii.
11. The student will be able to describe the judicial procedure for litter violations in Hawaii.
12. The student will be able to describe and research the four key factors necessary to control and reduce the causes and the spread of litter in Hawaii.

On the following page (B3), the learning objectives have been arranged in hierarchical order. Students should progress upward in the hierarchy as each objective depends upon the attainment of the previous objective. One exception, however, is objectives four and five which are simultaneously dependent on objective three and together form the basis for number six.

A HIERARCHY OF LEARNING OBJECTIVES FOR LITTER CONTROL



PRE- AND POST-TEST ON LITTER

A. State in writing or orally the answers to the following:

1. Give a definition for the term litter.
2. Name five classes of materials which may become litter.
3. List five sources of litter.
4. What are the four elements that cause litter to move from place to place?
5. List five places where litter might get trapped.
6. Name four factors needed to bring litter under control.
7. Name two hazards that can be caused by litter.
8. Give five reasons why people litter.
9. Name three actions required to control and reduce the spread of litter.
10. Name four agencies that are responsible for the control of litter in Hawaii.

B. Complete the following sentences by filling in the blank spaces with the best answers:

1. Elements which can cause litter to spread from one place to another are _____ and _____.

    a. dirt
    b. wind
    c. sun
    d. water

2. Locations where litter might become trapped are _____ and _____.

    a. bases of fences and walls
    b. moving vehicles
    c. grassy and planted areas
    d. tops of sloped roofs

3. Some types of litter one may find in Hawaii are _____ and _____.

    a. wrappers
    b. boats
    c. moving cars
    d. beverage cans

4. Litter may be defined as _____ and _____.

   a. containerized solid waste
   b. uncontainerized solid waste
   c. solid waste that is out of the stream in which it belongs
   d. containerized liguids or gasses

5. Some practices necessary to control litter are _____ and _____.

   a. pedestrians holding discards that will later be thrown on the ground
   b. operators and drivers of open trucks that transport loose materials making sure they are not covered
   c. pedestrians/picnickers holding discards for proper receptacles
   d. contractors providing and using adequate containers for trash

C. Write the letter that matches the correct answer with the definitions in the spaces below.

| | |
|---|---|
| a. sources | g. sanitary |
| b. dispose | h. highways |
| c. refuse | i. pick up |
| d. litter | j. garbage |
| e. litter bag | k. filthy |
| f. refuse truck | l. untidy |

__ 1. Not clean; very dirty.

__ 2. A place for storing waste in the car.

__ 3. That which is garbage, rubbish, junk and litter.

__ 4. To reach down and get.

__ 5. Free from dirt; healthy and clean.

__ 6. Waste food.

__ 7. To get rid of.

__ 8. A vehicle that picks up trash.

__ 9. Uncontainerized solid waste.

__ 10. Messy; not neat.

D. Write "T" if the statement is true; "F" if the statement is false.

__ 1. Moving traffic is an element which helps spread litter.

__ 2. Litter is human-made uncontainerized solid waste.

__ 3. Presently, there are no laws in the State of Hawaii against littering.

__ 4. Changing the public's attitudes, habits, and practices as they relate to littering is important in reducing the litter problem.

__ 5. Litter can be in the form of a gas, liquid, or solid.

__ 6. Depositing trash on public property (except in a proper container) is an offense in the State of Hawaii.

__ 7. All trash is litter.

__ 8. All trash that is in one's possession is not litter.

__ 9. Pedestrians and motorists are the only sources of litter.

__ 10. Sweeping up loose litter and containerizing it is one way to stop the spread of litter.

__ 11. People are less likely to litter in a clean area than in one that is dirty.

__ 12. Well-designed trash cans are used more frequently than unattractive cans.

__ 13. Abandoned automobiles and tall grassy areas usually are attractive places for litter.

E. Match the letter choice from Column B with the numbered term in Column A.

| Column A | Column B |
|---|---|
| __ 1. Litter | a. the act of training, developing or cultivating knowledge. |
| __ 2. Origin | b. a container used for the collection of litter. |
| __ 3. Lodge | c. scattered, uncontainerized solid waste. |
| __ 4. Receptacle | d. the source from which anything comes. |
| __ 5. Dispose | e. the act or process of getting rid of unwanted materials. |
| __ 6. Ecology | f. to get caught or stay in place, to trap. |
| __ 7. Litterbug | g. all the objects, persons, and conditions in the surroundings. |
| __ 8. Education | h. in the United States a person who throws trash along a highway, on a sidewalk, or in a park. |
| __ 9. Environment | i. the study of the environment. |

ATTITUDINAL QUESTIONS FOR PRE- AND POST-TEST

F. These questions may be used as part of the pre- and post-test or as an entirely separate test. Select the letter of the answer that you feel is the best choice.

1. You are walking home after school with a couple of your friends. The three of you are eating ice cream sandwiches. Your two friends throw their ice cream sandwich wrappers in some nearby bushes that already have a lot of rubbish. You don't see any litter receptacle around, so you:

    a. Drop your wrapper on the ground.

    b. Ask your friends not to litter and to pick up and hold their wrappers until they find a litter receptacle, even if it means holding on to the wrappers until they get home.

    c. Look around first to see that no one's watching you, then throw your wrapper in the bushes.

    d. Say nothing to your friends, but hold on to your wrapper until you come across a litter receptacle, even if it means holding on to it until you get home.

2. You are at a picnic and it just ended. There's litter on the ground. Some of the litter was caused by your picnic and the rest of the litter was on the ground before you came. Before everyone goes home, you:

    a. Suggest that everyone picks up all the litter in the area before leaving.

    b. Clean up some of the litter by yourself.

    c. Do nothing because the park janitor will clean it up.

    d. Clean up only the litter from your picnic.

3. You are riding in a car with some friends. You are sitting in the front seat on the passenger side with your window open. There's no litter bag in the car and the car doesn't have a back seat window that opens. Your friend in the back seat is eating some candy and gives you the candy wrapper to throw out the window. You:

    a. Throw the wrapper out the window.

    b. Ask your friend to leave the wrapper on the car floor.

    c. Take your friend's wrapper and hold on to it until you stop at a place that has a litter receptacle.

d. Look around to check that other cars aren't near by, then throw the wrapper out the window.

e. Ask your friend to hold on to the wrapper until you stop at a place that has a litter receptacle.

4. You are at the beach with your younger brother or sister. Your brother or sister unwraps a piece of chewing gum and throws the wrapper on the ground. You:

a. Pick up the wrapper and throw it away in the nearest litter receptacle.

b. Do nothing. It's such a small piece of rubbish that it doesn't matter.

c. Ask your brother or sister to pick up the wrapper and throw it away in the nearest litter receptacle.

d. Do nothing. The groundskeeper will clean it up.

5. You pass by a stream in your neighborhood that has a lot of litter along its sides and in the water. You:

a. Report it to the State Litter Control Program.

b. Get together with some of your friends to clean it up.

c. Do nothing because people will still litter in it anyway even after it gets cleaned up.

d. Do nothing because you did not cause the litter.

6. You are at a picnic. You just finished eating your lunch and you want to get rid of your rubbish. There's only one rubbish can in the area and it's already filled. Your friends are trying to squash their lunch rubbish in the filled can but it's a windy day, and some of the rubbish is spilling on the ground. You notice that another group of picnickers nearby are putting their rubbish in a litter bag that they brought. You:

a. Pick up the spilled rubbish and try to squash it and your own rubbish in the can.

b. Go over to the other group of picnickers and ask them if they have an extra litter bag you could use.

c. Gather the spilled rubbish into a neat pile on the ground next to the can and place your own rubbish there.

d. Put your rubbish in some nearby bushes so it won't blow away.

## ANSWERS TO PRE- AND POST-TEST

A. 1. Litter is uncontainerized solid waste.
Litter is any uncontainerized solid waste that is out of the stream in which it belongs.

2. Paper, metal, plastic, glass, rubber, etc.

3. Pedestrians, motorists, household refuse, commercial refuse, loading and unloading operations, uncovered trucks, construction projects.

4. Wind, water, traffic, animals.

5. Bases of walls, bases of fences, grassy and planted areas, embankments, catch basins, strips between streets and sidewalks, under porches, beaches against walls and rocks, harbors, reef areas against rocks and coralheads.

6. Ordinances, modern technology, education, enforcement.

7. Serious accidents (cuts, broken bones,etc.), fires.

8. Laziness, carelessness, unconsciousness, apathy, disregard for others' property, etc.

9. Stemming the flow from the seven sources, keeping it from spreading, cleaning the places at which it gets trapped.

10. Police Department, Department of Health, Office of Environmental Quality Control, Fire Department, Department of Transportation, etc.

B. 1. b, d
2. a, c
3. a, d
4. b, c
5. c, d

C. 1. k
2. e
3. c
4. i
5. g
6. j

D. 1. T
2. T
3. F
4. T
5. F
6. T
7. F
8. T
9. F
10. T
11. T
12. T
13. T

E. 1. c
2. d
3. g
4. b
5. e

F. 1. b
2. a
3. e
4. c
5. a or b
6. b
7. i
8. a
9. h
6. j
7. b
8. f
9. d
10. l

## Chapter III

## THE LITTER PROBLEM

This chapter provides an analysis of the litter problem including descriptions of the various aspects of the problem, the actions necessary to reduce litter, and the State of Hawaii's approach to the problem.

### The Content of Litter

A generally-accepted description of litter is that it is human-made solid waste which is not where it belongs - in containers.

Look around closely and find items that fit this description at various locations, such as:

- Beaches
- Streets
- Sidewalks
- Alleys
- Driveways
- Yards
- Parks
- Playgrounds
- School grounds
- Parking lots
- Vacant lots
- Boat harbors
- Rural lands
- Reef areas

Studies have shown that the uncontainerized solid waste found in abundance at these locations covers a wide range. In fact, there are one hundred fifty (150) separate items that can be classified in five groups as to content. These groups and sample items are listed below.

Paper

Advertising materials: circulars, handbills, posters, signs
Containers: bags, cartons, boxes, cups
Entertainment materials: sports and theater programs, tickets
Household items: lists, cleansing tissues, napkins, receipts
Office supplies: invoices, memorandums, folders, scrap paper
Reading materials: newspapers, magazines, paperbacks, books
Shipping materials: corrugated paper, shredded paper, wrappings
Smoking products: cigarette packages, match books
Wrappers: candy, ice cream, foods
Writing materials: envelopes, stationery, postcards

Metal

Automotive parts: hub caps, tire rims, mufflers
Beauty aids: curlers, lipsticks, compacts
Building materials: hardware, pails, stripping
Containers: cans, tubes
Household items: appliances, furniture

Plastic

Beauty aids: combs, accessories

Containers: bottles, jars, bags, cartons

Wrappings: food, gifts, household items

Glass

Containers: bottles, jars

Household items: light bulbs, window panes

Miscellaneous

Automotive parts: tires, inner tubes, floor mats

Building materials: boards, bricks, shingles, residue

Cleaning materials: rags, sponges, brushes, brooms, mops

Food: peelings, rinds, cores, bones, miscellaneous leftovers

Horticultural items: branches, cuttings, flower pots

Household items: mattresses, furniture

Smoking products: cigarette butts, cigar butts

Sporting goods: tennis, golf and beach balls, baseball gloves

Toys and games: balloons, dolls, stuffed animals

Wearing apparel: gloves, scarves, shoes, hosiery, ties, hats

What comes into focus from this list is that litter's content is the spectrum of items society uses in the daily process of living.

## The Constant Cycle

Until early in this decade, it commonly was assumed all litter came from two sources:

1. Pedestrians discarding materials along streets and at parks and recreational areas.

2. Motorists and passengers throwing materials from vehicles (including boats).

Analysis of litter content made it increasingly clear, however, that a lot had to be coming from sources other than pedestrians and motorists. In 1971-72, a research project sponsored by the United States Brewers Association set out to identify these other sources. It covered 105 cities of all sizes in 17 states representing almost half of the nation's population. Studies of litter for clues to what was responsible for litter led to these findings:

1. In residential neighborhoods, there was careless disposal of refuse at more than half the houses. Overloaded containers, uncovered containers and loose materials placed beside containers were creating litter throughout entire blocks.

2. Similar practices and conditions prevailed at more than one third of the commercial establishments observed.

3. Approximately seven out of ten loading and unloading areas were littered with wrappings, packing materials and other debris from the operations there.

4. Along roads they normally traveled, uncovered trucks were creating almost one fifth of the litter.

5. In some communities, as many as three out of four construction projects were serious producers of litter in the form of residue and worker lunchtime and coffee-break discards.

Thus, the fact surfaced that there actually are seven sources of litter:

1. Pedestrians/picnickers
2. Motorists/boaters
3. Household refuse
4. Commercial refuse
5. Loading and unloading operations
6. Uncovered trucks
7. Construction projects

Continuing observations confirm that, as is true elsewhere, all seven of these sources are responsible for litter in Hawaii. In our state, improper disposal of food and drink containers, smoking materials and the dumping of unwanted household goods and cars creates unsightly and unhealthy litter problems in parks, beaches and areas that should provide the most enjoyment. Even reef areas below the water level have been used as dumping grounds by beachgoers and boating enthusiasts.

## Dynamics at Work

Litter control would be easier if a large percentage of trash was not moved from its source.

Four elements give it mobility. Surveys have found that paper and other light objects frequently travel six to eight blocks from where they originated. Significantly, a single item may be observed by as many as 500 persons as it makes its journey. Factors beyond our control that make litter control difficult are:

1. WIND. It is the main carrier along and across smooth surfaces: streets, sidewalks, alleys, parking lots, other paved areas, beaches, and open grassy areas.

2. WATER. A common belief is that heavy rains, streams, ocean waves and currents get rid of a great deal of litter by causing it to disintegrate. Actually, depending on the surfaces, they merely transfer much of it from one location to another with catch basins getting a large share.

3. TRAFFIC. Movement of feet and cars have been observed taking litter on 17 round trips between sidewalks and streets while pushing it along adjacent blocks.

4. ANIMALS. Exposed refuse provides convenient opportunities for loose dogs and cats, mongooses, and rats to be regular carriers along paths they consistently prowl.

While some of the traveling litter is swept up along the way, a substantial portion is not. It keeps going until it finally becomes trapped at such locations as:

- Beaches against walls and rocks
- Fence and wall bases
- Grassy and planted areas
- Embankments
- Catch basins and piers
- Strips between curbs and sidewalks
- Vacant lots
- Reef areas against rocks and coral heads

Unfortunately, even where a conscientious effort is made by people to clean regularly, a prevalent practice is to clean only smooth surfaces and to let trapped litter accumulate for long periods.

Studies of dates on receipts, newspapers, and envelope postmarks have shown that some have been in piles of litter for as long as six years. This explains why, in most areas, trapped litter is a high percentage of the litter in constant evidence.

Thus, unless effective steps are taken to change it, the litter cycle is perpetual. It begins with a continuous, converging flow from the seven sources. Four elements combine to widen this flow. Repeated cleaning siphons off part of it. The rest is deposited in traps where it builds up until finally removed, making way for new accumulations.

## The Negative Effects

Over the years, the aesthetic factor has been offered as the main reason for doing something about litter. Today other factors are gaining more prominence. For one thing, it is clear that litter is a financial drain on hard-pressed, taxpayer-supported state and municipal budgets. Untold hours of work and dollars are required for:

- Custodial staffs to carry on the never-ending task of trying to keep school buildings and grounds clean.

- Federal and state government crews to clean the same vacant lots, roadways, harbors, streams and beaches over and over and inspect construction and demolition sites.

- City and County parks and recreation department employees to perform the daily assignment of removing litter from parks, playgrounds, beaches and other recreational areas.

Citizens demand this cleaning. At no time of the year is there a let-up in complaints from the public about littered conditions the public itself creates. So it is necessary to spend millions of dollars in a frustrating attempt to deal with a negative--litter. This is money that could be used for an infinite number of positive purposes such as helping to hold the line against rising costs of local and state governments.

On another score the fact that accumulations of flammable litter are definite fire hazards is well established. Fires that result from spontaneous combustion and carelessness can be reduced if people are more careful about their litter habits.

There is also the matter of health. Exposed refuse is the greatest single attraction to rats, flies, roaches, and other insects. Moreover, piles of paper give rodents one of their favorite hiding places.

Two other points should be made:

1. Litter plays a role in furthering neighborhood decay.

2. Litter carried in runoffs adds to stream and ocean pollution.

There are, then, practical reasons for doing something about the litter problem.

## Why Does It Happen?

Psychologists and others have devoted considerable attention to the reasons people litter. Among their principal conclusions are the following:

1. Laziness

   This manifests itself in a number of ways. Not going a few steps out of the way to use a public litter receptacle, not taking the trouble to clean up spillage from overloaded refuse containers, and not bothering to containerize loading and unloading debris.

2. Carelessness

   This, too, is reflected in different ways. Tossing litter at receptacles instead of into them, leaving lids off refuse containers, and covering only parts of trucks loaded with loose materials.

3. Lack of Awareness

   This is the case with many pedestrians. They automatically discard litter on the ground without thinking and without really being aware of contributing significantly to a problem. It is part of a long-established habit pattern.

4. Inadequate Litter Receptacles

   Many persons have a compulsion to get rid of wrappers, containers and other items the instant they have served their purpose. If receptacles are immediately handy, they will use them. Otherwise the materials end up on the ground. Obviously, it is advantageous to have as many receptacles as possible and to locate them where recurring litter indicates they will do the most good.

5. Peer Influence

Some years back, a pilot school research project conducted by Bridgeport Public Schools, Bridgeport, Connecticut found that there was a tendency for children, responsive to litter-control education in the early grades, to abandon their good disposal practices as they progressed through the higher grades.* The rationale was that as they grew increasingly conscious of their elders' littering habits they became followers.

6. Disregard for Others' Property

Many individuals have a tendency to respect what they themselves own, but to have a different attitude about what belongs to somebody else. They have little compunction about littering anywhere other than at their own homes.

7. Apathy

The evidence is that surprising numbers of persons accept litter as a way of life. Much of this can be attributed to not being exposed to sound arguments in favor of clean surroundings and to the philosophy of accepting individual responsibility for them.

8. Lack of a Sense of Responsibility

Many also rationalize that as long as employees are paid to clean public or other properties, there is nothing wrong with littering them; in other words, litter is expected of them. This accounts in significant measure for the constant need to clean streets, amusement parks, picnic areas, shopping centers, government properties and the like.

9. Lack of Discipline

The public usually knows when laws are not enforced regularly or seriously. Where and when this is true with regard to laws applying to litter, a situation is created wherein there is little fear of being apprehended, and littering goes on unabated.

10. Lack of Training

Many individuals have not been made conscious of the negative effects of litter and of how they, as individuals, contribute to the problems it causes.

## ACTIONS NECESSARY TO REDUCE LITTER

To consider what causes the prevalence of litter in Hawaii is to conclude that three things must take place in order for this condition to change:

1. The flow must be stemmed from the seven sources.
2. The spread must be halted.
3. The traps must be cleaned up and kept clean.

* Study performed in the Bridgeport Public Schools, Bridgeport, Connecticut in the early 1970's (see page A1)

It is important then to examine what is involved in achieving these objectives.

1. Stemming the Flow

Since different factors and situations prevail with respect to each source, they are covered individually here.

A. Pedestrians-Picnickers

Obviously, the key to controlling pedestrian-picnicker litter is for people to hold discards for proper containers. Several islands have initiated "Litter Stop" programs that provide for large, 3 cubic yard dumpsters to be placed in convenient, well used sites around the islands. Private businesses are sponsoring these projects as a community service. Also, since June 30, 1979, minimum numbers of litter receptacles are required at certain public places under Public Health Regulations, Chapter 51. But it is still necessary for citizens to do three things:

(1.) Before discarding litter, look around to see whether there is a receptacle anywhere in the vicinity. If so, deposit it in the receptacle.

(2.) If no receptacle is in sight, pocket the discard for later disposal in a proper container.

(3.) When picnicking, get in the habit of taking along large plastic bags and leave your tied full bag in or next to the park containers.

B. Motorists/Boaters

In studies by litter experts, the following observations have been made:

(1.) Four out of five drivers who have litter containers in their cars generally use them for their discards.

(2.) Where containers are visible in the cars, the tendency is for passengers to use them also.

(3.) Fewer than one of every five cars has a container in it.

These figures suggest that littering by motorists/boaters will decrease as the number of drivers who carry containers in their cars/boats increases. Hence, an objective should be to get them into more cars/boats. The value of doing so is illustrated by this simple calculation:

> For every 1,000 vehicles in which just five items are put into car containers over a given weekend, there are 5,000 fewer pieces of litter on the streets and elsewhere that Sunday night.

Inexpensive litterbags can be purchased for cars and boats at variety stores and similar retail outlets or auto supply stores. Just a plain bag will do, and there are interesting possibilities in decorating ordinary bags for the purpose.

## C. Household Refuse

Careless refuse disposal is the largest single source of litter in residential neighborhoods. It is responsible for most of what constantly has to be cleaned from alleys and for much of what is on streets adjacent to alleys. Households that do not have enough trash containers to meet their needs often create illegal dumps in rural areas and access roads as a means of ridding themselves of trash.

Because of the high degree of illegal dumping and careless disposal practices, a substantial part of refuse budgets is spent on cleaning up. These monies could be put to other uses if more residents would follow these practices:

(1.) Have sufficient containers to handle the volume of refuse they produce.

(2.) Load containers carefully to avoid hardpacking and overflowing. (These add to litter by making it difficult for collection crews to empty contents without additional spillage.)

(3.) Keep containers covered.

(4.) Securely package or tie loose excess materials that result from unusual circumstances, such as holidays.

(5.) Discourage foraging animals by putting two tablespoons of household ammonia in each plastic bag before tying it, and making sure it is tied tightly.

(6.) Call your City and County Bulky Item Collection Service for pick-up of large items.

(7.) Acquaint yourself with your city and county refuse ordinances and follow them.

(8.) Call the Abandoned Car section of your Police Department to report abandoned and derelict cars.

There is something else to consider. Following the practices that have been listed would also make it possible to hold the line against rising costs for household refuse collection. Since it takes longer to collect refuse that is improperly containerized, improving containerization practices would speed the collection process making it less costly and more efficient.

## D. Commercial Refuse

To observe commercial sections of Hawaii is to note numerous instances of overloaded, uncovered containers, with resultant litter scattered not only on the immediate premises but on nearby streets and other properties. Much of the problem is due to lack of adequate container capacity on the premises and/or lack of regular collection service by the private licensed contractors.

This situation can be remedied with the full cooperation from commercial enterprises. Owners and managers of these enterprises must adopt the same disposal practices that have been listed in connection with residents.

## E. Loading And Unloading Operations

The nature of these operations is such that they normally have to be carried on rapidly in order to minimize worktime, use of space, and traffic obstructions.

Unfortunately, it is not always feasible to have and use on-the-spot containers for immediate disposal of wrappings, wires, cord, and other residue that is part and parcel of the work, but wherever this is practical, such a procedure should be followed. In any case, it is important, in the interest of controlling litter created at and scattered from these areas, to have a policy of end-of-working-day cleanup of any debris that has not been containerized.

## F. Uncovered Trucks

Along with creating litter, uncovered trucks transporting loose materials present three kinds of hazards:

(1.) Small particles, such as dust, can cause damage to the eyes of pedestrians and motorists.

(2.) Larger objects can injure pedestrians and cause damage to cars by falling on them.

(3.) Larger objects also can cause accidents by falling in the paths of cars.

Thus there is a combination of reasons for making sure proper covering prevents materials from flying, spilling or dropping off in the course of hauling.

## G. Construction Projects

Wherever building takes place, two litter-producing factors are in the picture:

(1.) Creation of normal residue from unpacking and use of construction materials.

(2.) Worker discards of lunchtime - coffee-break wrappings, paper cups, paper napkins, etc.

As with loading and unloading operations, it is important that on-the-spot containers for these materials be provided and used wherever feasible and that there be end-of-working-day cleanup of any litter that has not been containerized.

2. Halting the Spread

The key to immobilizing the four dynamics which cause litter to move is to sweep or pick it up as it begins accumulating on smooth surfaces and in open areas. In doing so, the practice of creating "perpetual" litter should be avoided. This is what results from pushing it from one place to another, such as from sidewalks to streets and from beaches to reef areas and harbors.

3. Dealing with the Traps

The first need is to get rid of already existing accumulations at the types of locations listed earlier. The second is to watch these locations thenceforth and to keep accumulations from recurring by removing litter as it becomes lodged there.

## SYSTEMATIC APPROACH TO THE PROBLEM

### The State Litter Control Program

The necessary actions that have been outlined bring into focus the need for a systematic approach to the litter problem, with four interlocking components:

1. Adequate statutes and ordinances that set forth basic rules for citizens to follow.

2. Modern technology to facilitate proper containerization (public litter receptacles, efficient refuse collection methods, etc.).

3. Continuous education to create and maintain a public climate in which people want clean surroundings and accept individual responsibility for helping to achieve them.

4. Serious enforcement to back up the above three.

These components are the heart of a program now in effect in this state under direction of the State of Hawaii Litter Control Program. This program was established by the Director of Health on August 1, 1977 to carry out Act 2 of the 1977 First Special Legislative Session. The purpose of this act which was signed into law by Governor George R. Ariyoshi on June 16, 1977, is to "reduce the amount of litter in Hawaii".

A State Litter Control Plan, adopted in January, 1978, outlines the mechanisms to be used by the Litter Control Program (LCP) to reduce litter in the State of Hawaii. The Plan includes the following program elements:

1. Litter Hotline: litter hotline numbers are used to report littered areas which are investigated by the LCP.

2. Litter Cleanup Crews: volunteer and government cleanup crews pick up litter at sites reported to the Litter Hotline.

3. Statewide Cleanup Campaigns: annual cleanup campaigns are conducted each April to reduce a significant portion of the litter and focus public attention on the litter problem.

4. Provide Litter Receptacles (PLR) Program: contributions of litter receptacles and servicing are sought from the business community.

5. Vehicle Litter Watch: citizens report to the Litter Hotline the license plate or registration numbers of motor vehicles or boats littering on public property. Vehicle owners are notified of the reported violation.

6. Recycling Program: the program promotes the recycling of paper, cans, and recyclable bottles.

7. Public Education and Awareness Program: television and radio public service announcements, brochures, posters, coloring sheets, a slide and tape show, and a newsletter are utilized to educate and to make the public aware of the litter problem and what they can do to reduce it.

8. Litter Education in the Schools: a litter curriculum and accompanying materials have been developed for elementary and secondary grade levels.

9. Workshop Program: workshops are conducted for public agencies, civic and service groups, community and business organizations, and other interested groups to inform them of the litter problem and encourage positive action to eliminate litter.

10. Litter Survey Program: item-count surveys and litter attitude and awareness surveys are conducted to measure the litter problem, effectiveness of the LCP, and changing public attitudes regarding litter.

11. Volunteer Litter Inspector Program: volunteers identify littered areas in their community and analyze the litter found there to determine the sources and propose steps for removal of the sources.

12. Monthly Newsletter: litter control projects and community activities are communicated to individuals and heads of all organizations and agencies in the state.

A State Interdepartmental Committee composed of representatives from litter-related state departments was established in March, 1978, to assist the LCP in implementing the Litter Control Plan. The Committee coordinates the agency litter control activities. The LCP is also promoting an interdepartmental committee for each county and coordinating litter control activities with the county agencies.

Additional information on the Litter Control Program may be obtained from:

Litter Control Program
Department of Health
1250 Punchbowl Street, Room 123
Honolulu, Hawaii 96801

Telephone (Oahu) 548-3400

The Governor's Advisory Committee on Litter Control

On July 26, 1977, Governor George R. Ariyoshi established the State Advisory Committee on Litter Control. The Committee, representing a broad cross section of the community, works closely with the Litter Control Program to implement the Litter Control Plan.

The work of the Committee includes the following areas;

1. Legislative and Enforcement:

   a. Review existing state and county laws, ordinances, and regulations and recommend changes.

   b. Review efforts of the police, courts, public prosecutor, attorney general, and other enforcement agencies and recommend changes to expedite cooperation and enforcement.

2. Government Service:

   Review and recommend specific measures that state, federal and county agencies can implement to improve refuse handling systems, i.e. more trash containers at bus stops and tourist sites, additional pick-up services, etc.

3. Public Education and Awareness:

   Review and recommend specific programs to promote the anti-litter ethic and cleanup efforts within the school system and before the general public. Included are mass media advertising, promotional spots and materials.

4. Special Projects:

   Set up special projects such as privately sponsored roadside dumpsters, to establish highway signs promoting the anti-litter ethic, and to set up a sponsorship plan for promotion and distribution of car litter bags, etc.

5. Resource:

   Solicit sponsors and/or sources of litter bags, trucks, refreshments, and special equipment for voluntary cleanup efforts or special activities throughout the year.

6. Communications:

Maintain contact with voluntary groups, businesses and other cleanup project participants to encourage cleanups and other litter control related activities within the community.

# Chapter IV

## INSTRUCTIONAL GUIDELINES

This chapter sets forth instructional guidelines covering twelve lessons which are designed to promote attainment of the learning objectives originally listed in Chapter Two. For each lesson learning content, instructional activities, and assessment tasks have been delineated.

### LEARNING OBJECTIVE 1.0

1.0 The student will be able to state orally, write or identify a definition of the term litter.

| | Learning Content | Instructional Activities | Assessment Tasks |
|---|---|---|---|
| 1.0 | Definitions of the term litter. | Have students state orally their definitions of the term litter. | Students will select the card with the correct definition of the term litter from a pile of three cards (one with correct definition, two with incorrect definitions). |
| | | 1.0.1 Record statements on chalkboard. | |
| | | 1.0.2 Allow time for students to react to various definitions. | |
| 1.1 | Litter is any uncontainerized solid waste that is out of the place in which it belongs. | Assign students to research and read to the class a definition of the term. | Students will state orally a definition of the term litter. |
| 1.2 | Litter is uncontainerized solid waste. | Distribute copies of the teacher's definitions of the term litter. | Students will write a definition of the term litter. |
| 1.3 | Litter is solid waste that is scattered about in disorder. | Have students record in notebooks four definitions of the term litter that they clearly understand. | |
| 1.4 | Litter is any solid waste that is discarded in the wrong place. | | |

### LEARNING OBJECTIVE 2.0

2.0 The student will be able to name five different types of materials that may become litter.

| | Learning Content | Instructional Activities | Assessment Tasks |
|---|---|---|---|
| 2.0 | Some types of litter. | Have students view a display of pictures of different types of litter. | Students will bring five articles of different types of materials that may become litter. |
| 2.1 | Paper: wrappers, reading materials, napkins, tissue | Show slides or movies about the types of litter. | Students will state orally five different types of materials that may become litter. |
| | | 2.1.1 Have students discuss and react to the slides and movie. | |
| | | 2.1.2 Have students draw and color pictures of different types of litter. | |
| 2.2 | Metal: automobile parts, cans, pipes, household articles, nails | Give students the list of materials that may become litter. | Students will write the names of five types of materials that become litter. |
| 2.3 | Plastic: combs, wrappers, bags containers | Have students make a picture scrapbook with labels of the different types of litter. | Students will point out five different types of litter in pictures of littered scenes. |
| 2.4 | Glass: bottles, jars, light bulbs | Have students identify the various types of litter while touring the neighborhood. | |

## LEARNING OBJECTIVE 2.0 (CONT'D)

| | Learning Content | Instructional Activities | Assessment Tasks |
|---|---|---|---|
| 2.5 | Rubber: mats, tubes, tires, boots | | |
| 2.6 | Building materials: boards, bricks, shingles | | |
| 2.7 | Food--Garbage: bones, peelings, rinds, crumbs, shells | | |

## LEARNING OBJECTIVE 3.0

3.0 The student will be able to identify five sources of litter.

| | Learning Content | Instructional Activities | Assessment Tasks |
|---|---|---|---|
| 3.0 | The seven sources of litter. | Have students view slides or pictures of the seven sources of litter. | Students will correctly point to five sources of litter from a group of ten slides or pictures. |
| | | 3.0.1 First, have small groups of students discuss the slides. | |
| | | 3.0.2 Next, regroup students so the different subgroups can exchange ideas from their observations. | |
| 3.1 | Pedestrians/picnickers | Prepare and display a chart illustrating the seven sources of litter. | Students will draw and color pictures of five sources of litter. |
| | | 3.1.1 Point out and discuss with students the seven sources of litter. | |
| | | 3.1.2 Give pictures with captions of the seven sources of litter to students. | |
| 3.2 | Motorists/boaters | Have students orally identify five sources of litter while on a field trip. | |
| 3.3 | Household refuse | | |
| 3.4 | Commercial refuse | | |
| 3.5 | Loading and unloading operations | | |
| 3.6 | Uncovered trucks | | |
| 3.7 | Construction projects | | |

## LEARNING OBJECTIVE 4.0

4.0 The student will be able to identify four elements that cause litter to move from place to place.

| | Learning Content | Instructional Activities | Assessment Tasks |
|---|---|---|---|
| 4.0 | The dynamics of litter. | Have students view a slide presentation or pictures of the four elements that cause litter to move from place to place.<br><br>4.0.1 Conduct small group discussions about the presentation.<br><br>4.0.2 Have large group interaction to gain feedback from the small group sessions. | Students will look at a series of eight pictures and correctly identify the four elements that cause the movement of litter. |
| 4.1 | The four elements that cause litter to spread from place to place. | Plan a field trip of the neighborhood or city to give students firsthand experiences in seeing how litter moves from place to place. | Students will draw pictures showing litter being moved by the four elements. |
| | 4.1.1 Wind | 4.1.1 Conduct group discussion during which students share their field trip experiences. | |
| | 4.1.2 Water | 4.1.2 Have students draw pictures of the four elements in the process of moving litter from place to place. | |
| | 4.1.3 Traffic | | |
| | 4.1.4 Animals | | |
| 4.2 | | Have students collect pictures or make posters illustrating the dynamics of litter. | Students will name orally the four elements that cause the movement of litter.<br><br>Students will list the four elements that cause litter to move. |

## LEARNING OBJECTIVE 5.0

5.0 The student will be able to describe five locations where litter gets trapped.

| | Learning Content | Instructional Activities | Assessment Tasks |
|---|---|---|---|
| 5.0 | Locations where litter get trapped. | Have students veiw slides or pictures of some of the locations where litter gets trapped.<br><br>5.0.1 Conduct group discussions allowing students to react to the presentation.<br><br>5.0.2 Encourage students to come up with other locations where litter might get trapped | Students will select from a collection of eight pictures five locations where litter might get trapped. |

## LEARNING OBJECTIVE 5.0 (CONT'D)

| | Learning Content | Instructional Activities | Assessment Tasks |
|---|---|---|---|
| 5.1 | Base of walls | Take students on a field trip in the neighborhood and locate different places where litter gets trapped. | Students will describe orally five locations where litter might get trapped. |
| | | 5.1.1 Have students discuss and write about their field trip experiences. | |
| | | 5.1.2 Have students draw and color pictures of the various places they saw where litter gets trapped. | |
| | | 5.1.3 Have students tell what they can do to help control and reduce the spread of litter. | |
| 5.2 | Bases of fences | | Students will state in writing five locations where litter might get trapped. |
| 5.3 | Grassy and planted areas | | Students will draw and label five pictures of locations where litter might become trapped. |
| 5.4 | Embankments | | |
| 5.5 | Catch basins | | |
| 5.6 | Strips between streets and sidewalks | | |
| 5.7 | Under steps | | |
| 5.8 | Under porches | | |
| 5.9 | Beaches against walls and rocks | | |
| 5.10 | Reef areas against rocks and coral heads | | |

## LEARNING OBJECTIVE 6.0

6.0 Students will be able to identify, name or write five reasons why people litter.

| | Learning Content | Instructional Activities | Assessment Tasks |
|---|---|---|---|
| 6.0 | Reasons why people litter | Have students discuss their ideas on why people litter. | Read to students ten phrases (five (5) "true" and five (5) "false") about why people litter. |
| | | | 6.0.1 Students will orally or in writing state the phrases that are "true" or "false." |
| 6.1 | Laziness | Place students into small groups of five to allow each student an opportunity to contribute to the discussion. | Students will state in writing or orally five reasons why people litter. |
| 6.2 | Carelessness | Instruct students to select a recorder for each group. | |

## LEARNING OBJECTIVE 6.0 (CONT'D)

| | Learning Content | Instructional Activities | Assessment Tasks |
|---|---|---|---|
| 6.3 | Lack of awareness | Regroup students in order to get feedback from the various subgroups. | |
| 6.4 | Inadequate litter receptacles | Record students' ideas on the chalkboard. | |
| 6.5 | Peer influence | Give students a list of some of the reasons the teacher thinks people litter. | |
| 6.6 | Disregarded for the property of others | Have students develop a questionnaire for use in the school or neighborhood on why people litter. | |
| | | 6.6.1 Using the questionnnaire, have students survey the school population or the neighborhood or both. | |
| 6.7 | Apathy | | |
| 6.8 | Lack of sense of responsibility | | |
| 6.9 | Lack of discipline | | |
| 6.10 | Lack of training | | |

## LEARNING OBJECTIVE 7.0

7.0 The student will be able to name two hazards of litter.

| | Learning Content | Instructional Activities | Assessment Tasks |
|---|---|---|---|
| 7.0 | Some of the hazards of litter. | Ask students to give their ideas of some of the hazards caused by litter. | Students will point out two pictures illustrating the hazards of litter from a group of five five pictures. |
| | | 7.0.1 Conduct group discussions with students and record their ideas. | |
| 7.1 | Health related | Have students view and discuss slides, pictures and films on the hazards of litter. | Students will name orally two hazards of litter. |
| | 7.1.1 Litter can cause bruises, cuts, sprains and broken bones. | | |
| | 7.1.2 Litter attracts and harbors infectious rodents, flies, roaches and other insects. | | |
| 7.2 | Fire related | Assign students to do research on the hazards of litter. | Students will list two hazards of litter. |
| | 7.2.1 Piles of dry litter can easily be ignited by carelessness with fire. | | |
| | 7.2.2 Litter can catch fire by internal combustion. | | |

## LEARNING OBJECTIVE 8.0

8.0 The student will be able to list and describe three actions necessary to control and reduce the spread of litter.

| | Learning Content | Instructional Activities | Assessment Tasks |
|---|---|---|---|
| 8.0 | Some actions that will reduce litter. | Have students give their ideas of the actions necessary for the control of litter. | Students will identify three methods to control and reduce the spread of litter by answering "true" or "false" statement ready by the teacher. |
| | | 8.0.1 Divide students into small groups and record their ideas. | |
| | | 8.0.2 Regroup students for interaction of ideas. | |
| 8.1 | Stemming the flow from the seven sources (See 3.0). | Have students tell what they can do individually to help control and reduce the spread of litter. | Students will state orally three ways to control and reduce the spread of litter. |
| 8.2 | Keeping it from spreading | Have students develop a daily checklist to record target litter areas in their school. | Students will write three ways to control and reduce litter. |
| 8.3 | Cleaning the places at which it gets trapped and keeping them clean. | Assign students daily or weekly to be responsible for cleaning any littered areas in their classroom. | Assign students daily or weekly to be responsible for cleaning any littered areas in their classroom. |
| 8.4 | | Have students present skits at assemblies and PTA meeting dramatizing ways to control and reduce the spread of litter. | |
| 8.5 | | Have students make posters and place in the classroom and halls to remind students to control and reduce litter. | |
| | | 8.6 Have students write slogans on litter control. | |
| | | 8.7 Have students make litter bags for the family car(s) from paper bags or milk cartons and color or paint them. | |

## LEARNING OBJECTIVE 9.0

9.0 The student will be able to identify, list and describe the responsibilities and functions of four litter control agencies.

| | Learning Content | Instructional Activities | Assessment Tasks |
|---|---|---|---|
| 9.0 | Agencies for the control of litter. | Arrange for students to hear talks on the responsibilities and functions of the litter control agencies in the State of Hawaii. | Students will select four of Hawaii's litter control agencies from a group of eight agencies. |
| | 9.0.1 Present information on litter control agencies. | | |
| | 9.0.2 Invite representatives from the various agencies to speak at school assemblies. | | |

## LEARNING OBJECTIVE 9.0 (CONT'D)

| | Learning Content | Instructional Activities | Assessment Tasks |
|---|---|---|---|
| 9.1 | | Have student bring in pictures of and newspaper articles on the agencies responsible for the control of litter in Hawaii. | Students will describe responsibilities and functions of four state litter control agencies. |
| | | 9.1.1 Let students present their articles and pictures to the class. | |
| | | 9.1.2 Have students add these pictures and articles to their litter notebooks. | |
| 9.2 | | Take students on field trips to the various litter control agencies. | Ask students to list and describe the responsibilities and functions of four state litter control agencies. |
| | | 9.2.1 Have students discuss their field trip experiences | |

## LEARNING OBJECTIVE 10.0

10.0 The students will be able to identify and describe four laws for the control of litter in the State of Hawaii.

| | Learning Content | Instructional Activities | Assessment Tasks |
|---|---|---|---|
| 10.0 | State and local laws | Display a chart containing four state or local laws for the control of litter in the State of Hawaii. | Students will identify four laws for the control of litter by answering "true" or "false" to items read by the teacher. |
| | | 10.0.1 Have students identify and state the laws for litter control. | |
| | | 10.0.2 Have students discuss these and give their reactions to them. | |
| | | 10.0.3 Have students record the laws in their notebooks. | |
| | | Take students on a field trip to a litter control agency office to secure firsthand information on laws for the control of litter. | Students will orally identify and describe four laws for the control of litter. |
| | | 10.1.1 Prepare students for a question and answer session with the members of the agency. | |
| | | Example: 10.1.1.1 Are any amendments on litter control up for adoption? | |
| | | 10.1.1.2 Are litter laws strictly enforced? | |

LEARNING OBJECTIVE 10.0 (CONT'D)

| | Learning Content | Instructional Activities | Assessment Tasks |
|---|---|---|---|
| 10.1 | | 10.1.2 Have students discuss and write about their field trip experiences.<br><br>10.1.3 Give students a copy of the teacher's written observations and reactions to the field trip. | |
| 10.2 | | | Students will list and describe four laws for the control of litter. |

## LEARNING OBJECTIVE 11.0

11.0 Students will be able to describe the judicial procedure for dealing with litter violations in the State of Hawaii.

| | Learning Content | Instructional Activities | Assessment Tasks |
|---|---|---|---|
| 11.0 | Judicial functions | Have students listen to talks on the judicial procedure for the control of litter in the State of Hawaii.<br><br>11.0.1 Display a chart on the judicial procedure related to litter violations in the State of Hawaii.<br><br>11.0.1.1 Have students discuss this procedure and give their reactions.<br><br>11.0.1.2 Have students record in their notebooks information from the chart and from discussion.<br><br>11.0.2 Invite representatives from a litter control agency to talk to the students at school assemblies. | Students will identify the judicial procedure related to the control of litter in the State of Hawaii. |
| 11.1 | Roles of Attorney General's and County Prosecutor's Office. | Have students do independent research on the judicial procedure related to litter violations.<br><br>11.1.1 Let students share their research with the class.<br><br>11.1.2 Share with the class materials that the teacher researched. | Students will state orally the judicial procedure related to the control of litter in the State of Hawaii. |

LEARNING OBJECTIVE 11.0 (CONT'D)

| | Learning Content | Instructional Activities | Assessment Tasks |
|---|---|---|---|
| 11.2 | Courts | Take students on field trips to a litter control agency and the courts. | Students will write a description of the judicial procedure related to the control of litter in the State of Hawaii. |
| | | 11.2.1 Try to visit the courts when there is a hearing in session on litter violations. | |
| | | 11.2.2 Have students discuss their field trip experiences and record them in their litter notebooks. | |
| 11.3 | Range of fines levied | | |
| 11.4 | | | |

## LEARNING OBJECTIVE 12.0

12.0 The student will be able to describe and research the four key factors that are necessary to control and reduce the spread of litter in the State of Hawaii.

| | Learning Content | Instructional Activities | Assessment Tasks |
|---|---|---|---|
| 12.0 | Key factors in controlling and reducing the spread of litter. | Display a chart of four key factors that are necessary to control and reduce the spread of litter. | Students will state orally the four key factors that are necessary to control and reduce the spread of litter. |
| 12.1 | Up-to-date ordinances | Discuss these factors with the students. | Students will write the four key factors that are necessary to control and reduce the spread of litter. |
| 12.2 | Modern technology | Have students copy the material from the chart into their litter notebooks. | Have students submit a report on the four key factors necessary to control and reduce the spread of litter. |
| 12.3 | Continuous education | Assign students to research the key factors that are necessary to control and reduce the spread of litter. | |
| 12.4 | Serious law enforcement | Have students discuss their research with the class. | |
| 12.5 | | Have students give their ideas on what can be done to bring the litter problem under control. | |
| | | 12.5.1 What ordinances and judicial procedures need to be mandated? | |
| | | 12.5.2 What can they do to control and reduce the spread of litter? | |
| | | 12.5.3 Have students record their ideas in their notebooks. | |
| 12.6 | | Have students go on field trips to the offices and facilities identified with establishing and enforcing litter control laws. | |

# APPENDIX

| | |
|---|---|
| Air pollutants | Materials discharged into the air in large enough quantities to contaminate the atmosphere. |
| Attitude | A feeling or emotion toward someone or something. |
| Bacteria | Microscopic plants, some harmless, some harmful. |
| Baling | The act of reducing solid material into cube-like shapes by mechanical compression. |
| Citation | An official summons to appear (as before a court). |
| Classification | Arranging and sorting of waste materials into groups. |
| Collection Center | A place where one can take waste materials that have been separated. |
| Cooperating | The act of working together for a common goal. |
| Community | A body of people with common organization or interests or living in the same place under the same laws. |
| Compactor | A mechanical device that compresses solid waste into a smaller volume. |
| Conservation | The protection or preservation of something; planned management to prevent destruction or neglect. |
| Container | A receptacle or flexible covering for storage or shipment of goods. |
| Contamination | Making unfit for use by the introduction of unwholesome or undersirable elements. |
| Control | A method used to guide, influence, regulate, or direct a system. |
| Debris | The remains of waste materials. |
| Demolition Waste | Litter products from the destruction of buildings, roofs, sidewalks and construction sites. |

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|---|---|
| Deterioration | Falling from higher or lower level in quality, character, or vitality. |
| Detrimental | Causing injury, damage or harm. |
| Disposal - | Getting rid of, discarding or throwing away of unwanted materials. |
| Dump | An open land site where waste materials are burned, left to rot, rust, or simply deposited. |
| Ecology | The scientific study of human and non-human organisms, their relationship to their physical environment and to each other. |
| Embankment | A raised structure of earth. |
| Emergency | A condition that requires immediate action or attention. |
| Enforcement | Requiring adherence to laws, rules, and regulations. |
| Environment | All the objects, persons, and conditions in the surroundings. |
| Environmental Protection Agency (EPA) | An agency of the federal government, formed in 1970, which has as one of its responsibilities ensuring that governmental, residential, commercial, and industrial waste disposal activities do not affect the physical environment. |
| Habit | The tendency to repeat a certain pattern of behavior without thinking. |
| Heterogeneous Waste | A variety of refuse materials, such as glass, paper, metal, and plastics. |
| Homogeneous Waste | Refuse composed of similar materials, such as paper, cardboard, tissue. |
| Horticulture | The science and art of growing fruits, vegetables, flowers, plants and trees. |
| Implementation | The act of carrying out or enforcing anything necessary to achieve the end. |
| Improvement | Change in a positive way. |
| Incinerator | A plant designed to reduce waste by burning. |

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|---|---|
| Landfill | A place where rubbish is deposited and covered with earth. |
| Litter | Scattered, uncontainerized solid waste. |
| Litterbug | In the United States, a person who throws trash along a highway, on a sidewalk, in a park, etc. |
| Littering | The act of carelessly discarding waste. |
| Maintenance | The upkeep of property or equipment. |
| Human-made | Something produced by human effort rather than by natural forces or by animals; artifically or synthetically created. |
| Human-power | Power supplied by the physical work of people. |
| Motivation | A strong desire to do something. |
| Ordinance | A law or order made by a town or city government. |
| Origin | The source from which anything comes; beginning. |
| Pedestrian | One who goes on foot; walker. |
| Perpetual | That which lasts forever; eternal. |
| Personal-social behavior | A person's behavior in relation to others. |
| Plastics | Human-made material that can be molded, cast, drawn or laminated into objects. |
| Premises | A house or building and its grounds. |
| Prevalent | That which is common or widespread. |
| Provision | A measure or precaution taken beforehand. |
| Public | Relating to or affecting all the people of a nation or a state. |
| Putout | Waste material placed in an area for pick-up and disposal purposes. |
| Receptacle | A container used for the disposal of litter. |

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|---|---|
| Recycling | The processing and changing of waste. |
| Refuse | Solid waste not carried from human habitations by sewers; consists primarily of ashes, rubbish, garbage, and trash. |
| Research | Experimentation and study aimed at discovering new facts, laws, or finding new meanings or existing ones. |
| Residential | An area for habitation of human beings. |
| Residue | Something that remains after a part is separated, taken or redesignated. |
| Resource | A usable supply of products or power. |
| Rodent | Any of an order of relatively small gnawing mammals. |
| Sanitation | The maintenance of cleanliness and healthful living conditions. |
| Site | A location or a place. |
| Sludge | Semiliquid waste that is the residue from the treatment of sewage. |
| Solid waste management | The entire process of storage, collection, transportation, processing, reclamation, and disposal of solid waste. |
| Source | The point of origin; the place from which anything comes or is obtained. |
| Technology | The means employed to provide objects necessary for human survival and comfort. |
| Trapped | Caught, stopped and held in place; lodged. |
| Trash | Any waste materials (usually not garbage); rubbish; refuse. |
| Vermin | Small animals that are troublesome or destructive, such as fleas, lice, mice and rats. |
| Violation | A breaking of law, rule, agreement or promise. |
| Waste | Anything considered useless or worthless. |
| Waste materials (solids) | A variety of substantial materials that are discarded and considered useless or worthless. |

B.

## SUPPLEMENTARY ACTIVITIES

The following activities may be used to supplement regular classroom activities in this guide or as part of a school-wide beautification project. School Building and Grounds and Classroom checklists may be used to develop awareness of local litter problems and to monitor progress in reducing litter.

1. Conduct a school-wide "Litter Olympics" with classroom against classroom or grade against grade in competition to see who can collect the most trash in a designated area (school grounds or local park, etc.). Appropriate prizes and/or recognition should be planned. This could include a beautification program (planting flowers, bushes, etc.).

2. Prepare a classroom or school bulletin board drawing attention to the litter problem. Photographs taken or pictures drawn by the students may be used to show the seven sources, factors that cause the spread of litter, areas where litter gets trapped or some nearby problem areas.

3. Form a playground patrol. Have the students make badges or some other means of identification and enlist them in a campaign against litter in their schoolyard. Ask them to sign anti-litter pledges and/or help them make litter prevention posters and arrange to have them displayed at school and in nearby stores.

4. Have students decide on a project around the school that would improve its appearance--litter pick up, weeding, carpentry repairs, some painting, planting projects, etc.; if the project requires special materials or supplies, expert labor, and such, work with the administration, P.T.A., sports support organization, community service organizations such as Boy Scouts or Lions Club, or local business people to obtain necessary money. Stress the need for <u>everyone</u> to do a fair share.

5. Plan a week where students select a small project around their own homes that can be done with minimal help from family; encourage taking before and after pictures. Suggested projects--weeding, cleaning up and reorganizing own bedroom, cleaning up of garage, cellar, attic, etc.--stress getting permission of family prior to embarking on project.

6. Organize a recycling project to generate funds for worthwhile school activities. This project may be done on a continuing basis with support from the local community. Aluminum and steel/tin cans, certain kinds of glass bottles, and newspapers may be collected and turned in to the recycling center. Local community service organizations or business people may help by providing the means to transport the material to the recycling center.

7. Schedule a field trip to The Recycling Center at 77 Sand Island Access Road. Students are taken on a free tour of the facilities and learn about the recycling process by viewing the accumulation, weighing, shredding, packing and shipping of cans and newspapers. See page E10 for information on the field trip to The Recycling Center.

8. Have students interview refuse collectors, public park groundskeepers, janitors, or other persons responsible for cleaning up or disposing of litter and report to the class on the problems encountered in these jobs.

*9. Have a "Litter Monster Contest" letting students create a monster with litter found in classroom or school ground.

*10. Have students do the coloring sheet activity on pages E11 to E20.

*These activities are particularly applicable to grades K-3.

A Suggested Activity:

Tour of School Building and Grounds

OBJECTIVE: Students will be able to identify areas of the school and grounds that need focused attention for the control of litter.

DESCRIPTION: Students will tour areas of the school and grounds to observe the presence of litter. During the tour a student committee will complete a checklist.

PROCEDURE: Instructor will view and discuss with class the Litter Control Program slide presentation.

CULMINATING ACTIVITY: Students will (1) construct a bar graph to show areas of the school and its grounds which have the greatest volume of litter; and (2) develop a program for controlling litter in these areas.

Tour of School Building and Grounds Checklist

| LOCATION | 0<br>No Litter | Occasional Litter<br>1<br>1-3 Pieces of Litter | Light Litter<br>2<br>4-6 Pieces of Litter | Medium Litter<br>3<br>7-10 Pieces of Litter | Heavy Litter<br>4<br>11 or more Pieces of Litter |
|---|---|---|---|---|---|
| Halls | | | | | |
| Stairways | | | | | |
| Boys Bathroom | | | | | |
| Girls Bathroom | | | | | |
| Principal's Office | | | | | |
| V-Prin's Office | | | | | |
| Counselor's Office | | | | | |
| Health Unit | | | | | |
| Media Centers | | | | | |
| Faculty Lounge | | | | | |
| Library | | | | | |
| Large Playground (Grassy Area) | | | | | |
| Small Hardtop Playground | | | | | |
| Front Area of School | | | | | |
| Side Area of School Left | | | | | |
| Right | | | | | |
| Back Area of School | | | | | |
| Cafeteria | | | | | |
| Auditorium | | | | | |
| Custodians Room | | | | | |

GRADE: _____ TEACHER: _____ RM. NO. _____

Daily Classroom Checklist

| Symbols | 0 | Occasional Litter 1 | Light Litter 2 | Medium Litter 3 | Heavy Litter 4 |
|---|---|---|---|---|---|
| LOCATION | No Litter | 1-3 Pieces of Litter | 4-6 Pieces of Litter | 7-10 Pieces of Litter | 11 or more Pieces of Litter |
| Student's Desk | | | | | |
| Teacher's Desk | | | | | |
| Book Cases | | | | | |
| Window Sills | | | | | |
| Top of Lockers | | | | | |
| Inside Student's Locker | | | | | |
| Classroom Floor | | | | | |
| Area in Hall Outside Classroom | | | | | |
| Trash Can Area | | | | | |

## Field Trip to The Recycling Center

| | |
|---|---|
| CONTACT: | Major E. Wheeler, General Manager, The Recycling Center |
| PHONE: | 847-3131 |
| LOCATION: | 77 Sand Island Access Road |
| DAYS/HOURS: | During regular school months, tours are conducted Tuesday through Friday at 10:00 a.m. or 2:00 p.m. |
| ACTIVITIES: | Free tour of The Recycling Center. If students have collected cans and newspapers for a recycling project, they may bring them to the Center to obtain the cash for them. |
| RESOURCES: | Monthly Newsletter |
| RESTRICTIONS: | Suggested size of group - no more than 25 students. |
| SPECIAL REQUIREMENTS: | Students must wear shoes. |

## Coloring Sheet Activity

The following coloring sheets may be used to stimulate class discussion on litter control. Students can color in the picture before or after each coloring sheet theme is discussed. Students may also be asked to create their own drawings and "Aloha is..." litter themes.

The copyright holder, George Kanahele, is permitting duplication of the coloring sheets for educational purposes. Teachers may reproduce the coloring sheets or request copies from the Litter Control Program. The LCP has a limited supply of coloring sheets available.

The questions below may be used in discussing each theme.

1. Taking your own trash bag to a picnic.
   When students go to a picnic, do they or their parents take trash bags?
   Why should you take trash bags to a picnic?

2. Helping Dad bundle up old newspapers.
   How do the students' parents get rid of old newspapers at home?
   How many students have collected newspapers for recycling?
   How much are newspapers worth? (1 cent a pound)

3. Thinking of others.
   How does not littering and using a trash receptacle show that you're thinking of others?
   Why is it important to cover the trash can tightly?

4. Caring for litter barefeet.
   How can litter be dangerous?
   What kinds of materials are dangerous?

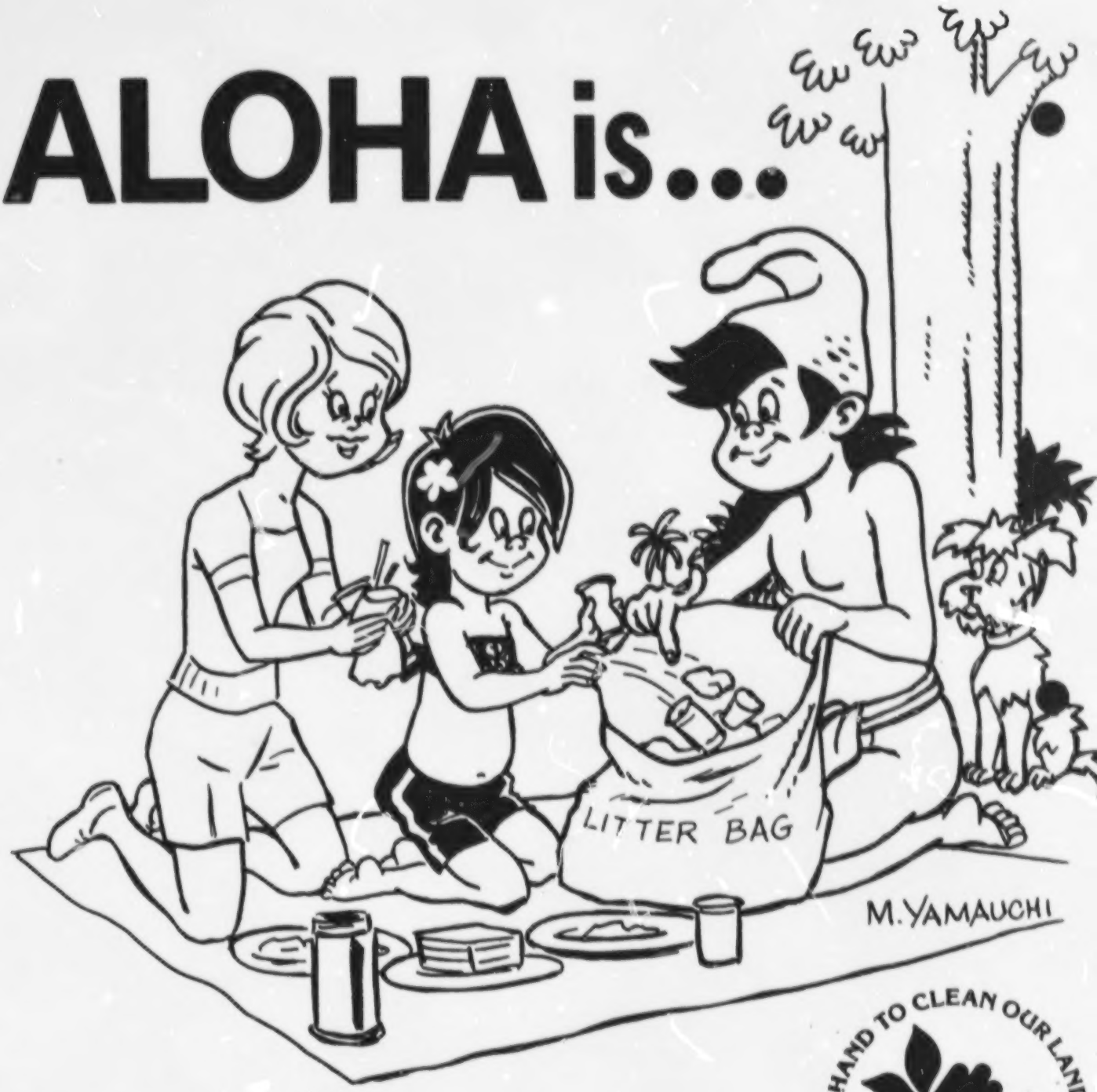
5. Giving your parent a litter bag for his car.
   How many of the students' parents have litter bags in their cars?
   What does the law say about littering from cars?

6. Picking up rubbish when nobody is looking.
   How many students have ever picked up rubbish and put it in a trash can when no one asked them to?
   What does that show about those persons?

7. Having a litter party.
   How many students have ever cleaned a littered area in their community?
   Are there any areas around the school or in their community where students could have a "litter party"?

8. Returning aluminum cans.
Have students or anyone in their family ever collected cans for recycling? The Recycling Center also accepts steel cans. What's the difference between aluminum and steel cans? (Show an aluminum and steel can for comparison.)
How many aluminum cans does it take to get 20 cents from the Recycling Center? (35)

# ALOHA is...




taking your own trash bag to a picnic.

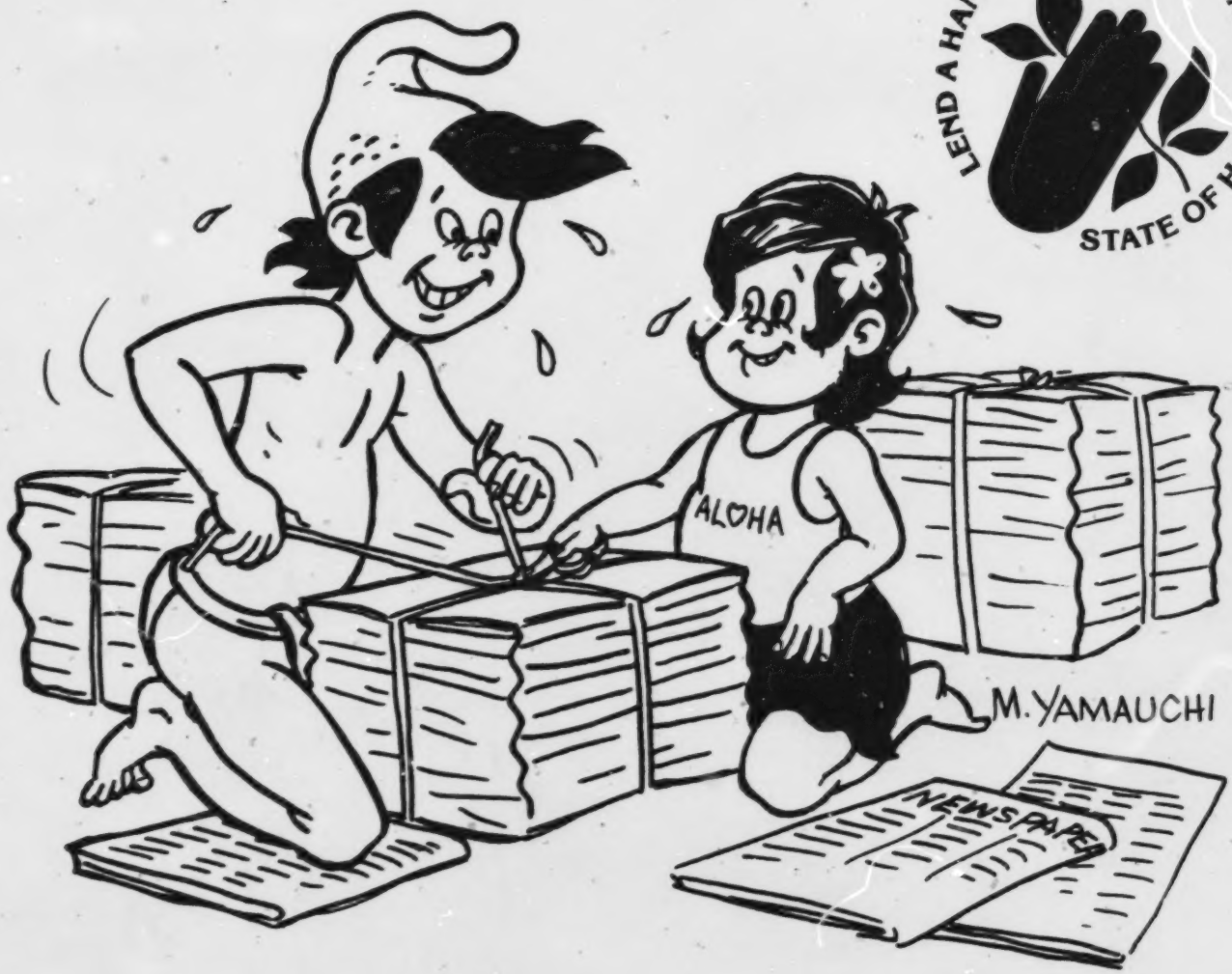
LEND A HAND TO CLEAN OUR LAND · HAWAII · STATE OF

© George S. Kanahele

LITTER CONTROL PROGRAM, DEPARTMENT OF HEALTH

# ALOHA is...

LEND A HAND TO CLEAN OUR LAND · STATE OF HAWAII




## •helping Dad bundle up old newspapers.

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LITTER CONTROL PROGRAM, DEPARTMENT OF HEALTH

# ALOHA is...

## thinking of others.



©George S. Kanahele

LITTER CONTROL PROGRAM, DEPARTMENT OF HEALTH

# ALOHA is...

LEND A HAND TO CLEAN OUR LAND · HAWAII
STATE OF HAWAII

M. YAMAUCHI

- caring for little barefeet.

© George S. Kanahele

# ALOHA is...

LEND A HAND TO CLEAN OUR LAND · HAWAII · STATE OF HAWAII

**giving your parent a litter bag for his car.**

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LITTER CONTROL PROGRAM. DEPARTMENT OF HEALTH

# ALOHA is...

- picking up rubbish when nobody is looking.

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LITTER CONTROL PROGRAM. DEPARTMENT OF HEALTH

# ALOHA is...

LEND A HAND TO CLEAN OUR LAND · STATE OF HAWAII

## having a litter party.

M. YAMAUCHI

HEO 20M 4/78

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LITTER CONTROL PROGRAM, DEPARTMENT OF HEALTH

E20

# ALOHA is...

LEND A HAND TO CLEAN OUR LAND · STATE OF HAWAII

- returning aluminum cans.

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## SUPPLEMENTARY INFORMATION

This section contains information which may be useful in conducting the activities listed in this guide. Governmental agencies and departments and private organizations concerned with litter reduction and control and recycling are listed along with sources of available films and speakers.

### Agencies and Departments Concerned with Litter

State

Department of Accounting and General Services: services and maintains state buildings and grounds; provides refuse collection services for public schools.

Attorney General: provides legal advice regarding litter control activities such as roadside dumpster program, cleanup projects, and maintenance of state property, and handles legal aspects of enforcement actions.

Department of Education: provides public school students with learning experiences related to the problem of litter, provides custodial services for maintenance of buildings and grounds.

University of Hawaii Environmental Center: coordinates the University of Hawaii's education, research and service efforts in the area of ecology, including litter.

Office of Environmental Quality Control: conducts environmental research and serves as environmental advisor to the Governor, various government agencies and private industry.

Hawaii Housing Authority (Department of Social Services and Housing): manages and maintains public housing projects.

Department of Health: has primary responsibility for coordinating state's litter control efforts, investigates environmental, pollution and sanitation problems, such as illegal dumps. and unsanitary food operations.

Office of Information (Governor's Office): provides information on the various state agencies.

Department of Land and Natural Resources: services and maintains state parks, public hiking trails, fish and game reserves and areas, forest areas, and other state lands, has responsibility for enforcement of fish and game, forest, and park regulations.

Department of Transportation: services and maintains state highways, harbors and airports; responsible for enforcement of airports and harbor regulations.

County

Responsibilities of County agencies vary; therefore, litter-related activities may not be conducted by the same agency in each county. Listed below are the county functions relating to litter and the department or agency likely to serve that function.

Building Department: inspects buildings to ensure safe and sanitary conditions.

City (or County) Council: promulgates laws and regulations that relate to litter control.

Fire Department: inspects buildings to prevent fire hazards due to accumulation of flammable and combustible materials.

Information and Complaints (Mayor's Office): provides information on county agencies and handles complaints regarding county problems, services and procedures.

Parks and Recreation: services and maintains parks and recreation facilities under the jurisdiction of the county; also, conducts beautification projects.

Police Department: issues citations to violators of state and county litter laws.

Prosecuting Attorney: prosecutes violations of state and county litter laws.

Public Works: operates disposal sites, collects household refuse, collects bulky items, and maintains county roads and streams.

Federal

The various federal agencies service and maintain facilities and grounds under the jurisdiction of the federal government.

Litter Laws

Statewide

Hawaii Revised Statutes

1. Chapter 339 (State Litter Law): No person shall discard or otherwise dispose of litter in a public place, on private property, or in the waters of the State except in a place designated for the disposal of garbage and refuse or into a litter receptacle or litter bag. No person shall damage or remove a litter receptacle from its place. No person shall transport litter from private households or commercial activities and discard them in public litter receptacles. Any person violating any provision of this chapter shall be fined not more than $250 and/or be ordered to pick up litter up to eight hours for each offense. In addition, violators may be ordered to pick up or pay for removal of the litter that they caused.

2. Section 727-5 (Depositing glass, etc. on highways): Whoever negligently or maliciously scatters, throws, drops, or deposits, or causes to be scattered, thrown, dropped, or deposited, any paper, glass bottle, tin can, nail, tack, wire, stone, or other substance dangerous to traffic on any highway, street, road, alley, or lane in the State, shall be fined not more than $100.

3. Hawaii Penal Code, Section 708-829 (Criminal Littering): A person commits the offense of criminal littering if he knowingly places, throws, or drops litter on any public or private property or in any public or private waters without the consent of the owner, whose interest is affected thereby. Criminal littering is a petty misdemeanor. The court may sentence any person convicted of committing the offense of criminal littering as follows: a) for the first offense, up to fours picking up litter on public property, and b) for any subsequent offense up to eight hours picking up litter on public property.

Statewide Traffic Code

1. Section 291c-131 (Spilling Loads on Highway):

   a. No vehicle shall be moved on any highway, unless such vehicle is so constructed, covered or loaded as to prevent any of its load, other than clear water or feathers from live birds, from dropping, sifting, leaking, blowing, spilling, or otherwise escaping therefrom.

   b. No vehicle shall be driven or moved on any highway when any load thereon is not entirely within the body of the vehicle; provided, however, that this prohibition shall not apply if the load is securely fastened by means of clamps, ropes, straps, cargo nets, or other suitable mechanical device to prevent such load from dropping onto the highway or from shifting in any manner.

2. Section 291c-132 (Littering from Vehicles): No person shall throw, place, or drop litter from a vehicle on any highway. The driver of the vehicle may be cited for any litter thrown, placed, or dropped from such vehicle. Penalty for first offense is up to four hours picking up litter on public property; second offense is picking up litter for up to eight hours.

Public Health Regulations

1. Chapter 51 (Receptacle Requirements) - The following public places shall meet requirements for the placement and servicing of receptacles:

   a. Bus Stops: 1 at each beach stop, bus shelter, school bus loading zone, major transfer point, or combination of the above; 1 at each official bus stop by 6/30/80.

   b. Drive-In Theatres: 2 per motorist exit.

   c. Sites of Carnivals, Fairs, Festivals, Circuses, Shows, Concerts, and other Public Events: 2 at each exit; 1 at each end of walk through exhibit building or tent; 1 at each food or drink booth; 1 at the entrance to each ride.

   d. Parks, Playgrounds, Beaches, School Athletic Areas: 1 at each pavilion, restroom structure, picnic area, softball or baseball backstop, major entrance to a gymnasium or swimming pool area; 1 for every 2 outdoor basketball, volleyball or tennis courts or combination thereof; 1 for each 120 bleacher seats or 1 per bleacher section.

   e. Gasoline Service Stations: 1 for each gas pump island block.

   f. Boat Fueling Docks: 1 at each fueling dock.

   g. Lookouts Along Public Highways: 1 for first 100 feet or fraction thereof, and 1 for each additional 50 feet of restraining wall or fence.

   h. Take-Out Restaurants: 2, plus 1 for every service window.

   i. Mobile Food Vendors: 1 at each mobile food vendor.

   j. Shopping Centers and Malls: 1 for each 200 feet or fraction thereof, of store frontage.

   k. Outdoor Parking Lots: 1 per first 50 stalls, plus 1 for each additional 200 stalls or portion thereof, except for employee parking lots, lots with less than 10 stalls, and parking lots not held out for public use.

   l. Parking Structures: 1 per stairway, elevator and pedestrian exit per floor; or 1 when a stairway, elevator or pedestrian exit are within 50 feet of each other.

## County Ordinances

Litter ordinances for the City and County of Honolulu are listed below. These ordinances can be found under Chapter 26, Article 4 of the Revised Ordinance of Honolulu. Contact the county clerk's office for the specific county ordinances for the counties of Hawaii, Maui, and Kauai.

1. Litter in Public Places: No person shall throw or deposit litter in or upon any street, sidewalk or other public place within the county except in public receptacles, in authorized private receptacles for collection, or in official county dumps.

2. Litter in Parks: In addition to Litter in Public Places, where such public receptacles are not provided, all litter shall be carried away from the parks by the person responsible for its presence and properly disposed of elsewhere.

3. Litter Thrown from Vehicles: No person, whether a driver or passenger in a vehicle, shall throw or deposit litter upon any street or other public place within the county, or upon private property.

4. Truck Load Causing Litter: Same as Statewide Traffic Code section 291c-131.

5. Litter in Streams, etc.: No person shall throw or deposit litter in any stream, fountain, pond, lake, bay or any other body of water in a park or elsewhere within the county.

6. Keeping Sidewalks Free of Litter: Persons owning or occupying property within the county shall keep the sidewalk in front of their premises free of litter.

7. Sweeping into Gutters: No person shall sweep into or deposit in any gutter, street or other public place within the county any accumulation of litter from any building or lot or from any public or private sidewalk or driveway.

8. Litter on Occupied Private Property: No person shall throw or deposit litter on any occupied private property within the county, except that the owner or person in control of private property may maintain authorized litter receptacles for collection so that litter will be prevented from being carried or deposited by the elements upon any street, sidewalk or other public place or upon any private property.

9. Litter on Vacant Lots: No person shall throw or deposit litter on any open or vacant private property within the county whether owned by such person or not.

10. Animal Wastes Prohibited: No person shall permit any animal owned by him or while in his custody to excrete any solid waste in any public place or on private premises not the property of such owner.

11. Placement in Receptacles/Prevent Scattering: Persons placing litter in public receptacles or in authorized private receptacles shall do so in such a manner as to prevent it from being carried or deposited by the elements upon any street, sidewalk or other public place or upon private property.

12. Litter from Aircraft: No person in an aircraft shall throw out, drop or deposit within the City any litter, handbill or any other object.

13. Posting Notices Prohibited: No person shall post or affix any notice, poster or other paper or device, calculated to attract the attention of the public, to any lamp post, public utility pole or shade tree, or upon any public structure or building except as may be authorized by law.

14. Owner Maintain Premises Free of Litter: The owner or person in control of any private property shall at all times maintain the premises free of litter. This section shall not prohibit the storage of litter in authorized private receptacles for collection.

15. Clearing Litter from Open Private Property: a) Notice to Remove. The Chief of Engineer is hereby authorized and empowered to notify the owner of any open or vacant private property within the City or the agent of such owner to properly dispose of litter located on such owner's property. Such notice shall be by Registered Mail, addressed to said owner at his last known address; and a copy thereof posted on the property.

16. Penalties: Any person violating any of the provisions of this Article shall upon conviction thereof be subject to penalties as set forth in the State Litter Law (HRS) 339-8. No violation of Section 26.4.4 (sidewalks) and 26.4.12 (owner maintain premises) shall have occurred unless the property owner or occupant has been given a warning citation and given a reasonable time to remove the litter.

## Government Agencies Involved in the Litter Problem

### Oahu

#### City and County of Honolulu

| | |
|---|---|
| Fire Department, Fire Chief's Office | 955-8301 |
| Land Utilization, Department of | 523-4414 |
| Historic, Cultural, Scenic Districts | 523-4252 |
| Shoreline Management | 523-4077 |
| Office of Information and Complaint | |
| Complaint | 523-4381 |
| Information | 523-4385 |
| Parks and Recreation, Department of | 523-4181 |
| Community Services | 523-4012 |
| Police Department | 955-8111 |
| Public Works, Department of | 523-4341 |
| Environmental Engineer | 523-4150 |
| Refuse Collection and Disposal Division | 523-4685 |
| Bulky Items and Dead Animal Collection | 523-4685 |
| Road Maintenance Division | 523-4471 |
| Wastewater Management Division | 523-4321 |
| Water Supply, Board of | 548-7081 |
| Water Information and Complaints | 548-6126 |

#### State of Hawaii

| | |
|---|---|
| Education, Department of, (Public Information) | 548-6911 |
| Environmental Quality Control, Office of | 548-6915 |
| Health, Department of | |
| Environmental Protection and Health Services | 548-6455 |
| Litter Hotline | 548-3400 |
| Pollution Investigation and Enforcement | 548-6355 |
| Land and Natural Resources, Department of | 548-6550 |
| Fish and Game Division | 548-4002 |
| Division of Forestry | 548-2861 |
| Division of Land Management | 548-7517 |
| Office of Ombudsman | 548-7811 |
| Transportation, Department of | 548-3205 |
| Water Transportation Facilities Division | 548-2570 |
| Land Transportation Facilities Division | 548-5710 |
| University of Hawaii | |
| Environmental Center | 948-7361 |
| Public Health, School of, (Environmental Health) | 948-8491 |
| Water Resources Research Center | 948-7847 |

#### United States Government

| | |
|---|---|
| Agriculture, Department of | |
| Forest Service Institute Office | 546-5639 |
| Army Corps of Engineers | 438-1331 |

United States Government (Cont'd)

| | |
|---|---|
| Environmental Protection Agency | 546-8910 |
| Interior, Department of | |
| Division of Law Enforcement | 546-5602 |
| Transportation, Department of | 546-5111 |
| Coast Guard, Civil Engineering | 546-5544 |
| CINCPAC Headquarters | |
| Public Affairs Office | 477-6282 |
| Air Force (Hickam) | 499-1660 |
| Army Headquarters | |
| Public Affairs Office | 438-9761 |
| Coast Guard District Office | 546-5531 |
| Marine Corps Headquarters | 477-6824 |
| Navy Headquarters | 471-8471 |

Hawaii

County of Hawaii

| | |
|---|---|
| Information and Complaints | 961-8211 |
| Parks and Recreation | 961-8311 |
| Police Department Headquarters | 961-2211 |
| Public Works Department | |
| Road Construction and Maintenance | 961-8349 |
| Sewers and Sanitation | 961-8338 |
| Water Supply Department | 935-1127 |

State of Hawaii

| | |
|---|---|
| Health, Department of | |
| Environmental Protection and Health Services | 961-7371 |
| Litter Hotline | 961-7371 |
| Office of Information | Enterprise 8067 |
| Land and Natural Resources, Department of | |
| Fish and Game Division | 961-7291 |
| Division of Forestry | 961-7221 |
| Division of State Parks | 961-7200 |
| Water and Land Development Division | 961-7279 |
| Office of Ombudsman (call collect) | 548-7811 |
| Transportation, Department of | |
| Water Transportation Facilities Division | 935-4877 |
| Land Transportation Facilities Division | 935-3347 |

United States Government

| | |
|---|---|
| Agriculture, Department of | |
| Forest Service | 935-6292 |
| Interior, Department of | |
| Bureau of Sport Fisheries and Wildlife, Damage Research Station | 935-2220 |

## Maui

### County of Maui

| | |
|---|---|
| Human Concerns, Department of | 244-7805 |
| Information | 244-7866 |
| Complaints | 244-7756 |
| Parks Department | 244-7750 |
| Planning Department | |
| Environmental Coordinator | 244-7735 |
| Police Department, Wailuku | 244-7811 |
| Public Works, Department of | |
| Highway Division | 244-3230 |
| Refuse Collection | |
| Hana | 248-8254 |
| Lahaina | 661-0501 |
| Makawao | 572-8686 |
| Wailuku | 244-4858 |
| Water Supply Department | 244-7730 |

### State of Hawaii

| | |
|---|---|
| Health, Department of | |
| Environmental Protection and Health Services | 244-4255 |
| Litter Hotline | 244-4255 |
| Office of Information | Enterprise 8067 |
| Land and Natural Resources, Department of | |
| Fish and Game Division | 244-4352 |
| Forestry Division | 244-4352 |
| Land Management Division | 244-4352 |
| State Parks Division | 244-4354 |
| Office of Ombudsman (call collect) | 548-7811 |
| Transportation, Department of | |
| Water Transportation Facilities Division | |
| Lahaina | 661-3557 |
| Maalaea | 244-7041 |
| Kahului | 877-6061 |
| Land Transportation Facilities Division | 877-5061 |

### United States Government

| | |
|---|---|
| Interior, Department of | |
| Geological Survey, Surface Water | 877-6135 |
| National Park Service | 572-7749 |

## Molokai

### County of Maui

| | |
|---|---|
| Fire Department | |
| Hoolehua (Business Office) | 567-6525 |
| Kaunakakai (Business Office) | 553-5601 |
| Parks Department | |
| Kaunakakai | 553-5775 |
| Kilohana | 558-8229 |
| Police Station, Kaunakakai | 553-5355 |
| Water Supply Department | 553-5857 |

State of Hawaii

Health, Department of . . . . . 553-5323
Office of Information . . . . . Enterprise 8067
Land and Natural Resources, Department of
Division of Fish and Game. . . . . 553-5415
Division of Forestry . . . . . 553-5019
Water and Land Development Division. . . . . .
Hoolehua. . . . . 567-6150
Kaunakakai. . . . . 553-5525
Office of Ombudsman (call collect) . . . . . 548-7811
Transportation, Department of
Water Transportation Facilities Division . . . . . 553-5105
Land Transportation Facilities Division. . . . . 553-5364

## Lanai

County of Maui

Police Station. . . . . 565-6525

State of Hawaii

Land and Natural Resources, Department of . . . . . 565-6688
Office of Information . . . . . Enterprise 8067
Office of Ombudsman (call collect). . . . . 548-7811

## Kauai

Kauai County

Information and Complaint Office. . . . . 245-3213
Police Department Headquarters. . . . . 245-6721
Public Works Department . . . . . 245-4751
Parks and Recreation . . . . . 245-4751
Beautification Section . . . . . 332-9541
Poundman--Animal Pickup. . . . . 245-3318
Road Construction and Maintenance. . . . . 245-4751
Water Department
Engineering and Administration . . . . . 245-6986

State of Hawaii

Health, Department of
Environmental Protection and Health Services . . . . 245-4323
Litter Hotline . . . . . 245-4323
Office of Information . . . . . Enterprise 8067

State of Hawaii (Cont'd)

| | |
|---|---|
| Land and Natural Resources, Department of | |
| Division of Fish and Game | 245-4444 |
| Division of Forestry | 245-4444 |
| Division of State Parks | 245-4444 |
| Division of Water and Land Development | 245-4444 |
| Office of Ombudsman (call collect) | 548-7811 |
| Transportation, Department of | |
| Water Transportation Facilities Division | |
| Nawiliwili | 245-6996 |
| Port Allen | 335-5511 |
| Land Transportation Facilities Division | 245-4461 |

United States Government

| | |
|---|---|
| Interior, Department of | |
| Fish and Wildlife Service | 828-1431 |
| Geological Survey, Surface Water | 245-3252 |

Private Organizations

Involved in Litter Reduction (Oahu)

| | |
|---|---|
| Clean Hawaii | 531-1145 |
| *The Outdoor Circle | 521-0074 |
| Pitch-In! | 955-4694 |

*The Outdoor Circle has chapters on Maui, Kauai, and Hawaii.

## Private Organizations Involved in Recycling (Oahu)*

Newspapers, aluminum and steel cans, bond paper, some brands of beer bottles and corrugated tabs are easily collected recyclable items. For buyers of scrap metals and other types of discards consult the Yellow Pages of your telephone directory.

C A S H  F O R  T R A S H

| FIRM | TELEPHONE | Newspapers | Aluminum cans | Steel cans | Bond paper | Beer bottles (check brands) | Corrugated tabs | IBM cards |
|---|---|---|---|---|---|---|---|---|
| Beer Recycling Center of Hawaii | 531-7711 | | X | | | X | | |
| Consolidated Fibers, Inc. | 524-4233 | X | | | X | | X | X |
| Hawaii Recycling Services, Inc. | 847-2068 | X | | | X | | | X |
| The Recycling Group | 847-3131 | X | X | X | | | | |

*There are recycling centers on Maui and Kauai and private recycling businesses are listed under Recycling Center and Waste Papers in the Yellow pages of your telephone book.

FILMS

Cycles:

15 minutes, 16 mm sound and color. Cleverly weaves nature's cyclical balancing with human need to recycle waste. Shows ways currently being tried. 4-Adult

Contact: The Outdoor Circle

The Litterbug:

7 minutes, 16 mm sound animated color cartoon by Walt Disney Productions. Donald Duck is the star of this picture which shows various types of litterbugs in action. K-3

Contact: The Outdoor Circle

The Litter Monster:

16 minutes, 16 mm sound and color. With the litter they have collected, kids make a "litter monster". K-3

Contact: The Outdoor Circle

Meecology:

30 minutes, 16 mm sound and color film presents four children, each with two interpretations of what one child can do for ecology. Simple mechanical photographic techniques such as speeding, slow motion, freezing, and back-winding add appeal. K-4

Contact: The Outdoor Circle
McDonald's of Hawaii

Only One:

12 minutes, 16 mm sound and color film of litter in Hawaii. Shows the natural beauty of Hawaii, ugliness caused by litter and suggestions for prevention. Explains that it takes only one person to litter, but it takes each and every one of us to clean it up. K-6

Contact: The Outdoor Circle

Pitch-In:

10 minutes, 16 mm sound and color film starring Jonathan Winters in four separate roles as a litterer. This comedy over-emphasizes to make its point about different types of littering that include unthinking, unintended and deliberate. 4-Adult

Contact: Department of Education, Technical Assistance Center (Video-tape copy)
Litter Control Program
Pitch-In!

Resource Recovery Is...:

20 minutes, 16 mm color film that gives a definition, a status report, a look into the future. It tells what resource recovery is and how it works in its various forms, and examines the outlook for the conservation of natural resources through the widespread application of resource recovery. 8-Adult

Contact: Pitch-In!
Department of Education, Technical Assistance Center (Video-tape copy)

SLIDE SHOWS

Litter! (Junk You Know):

7 minutes, color slide and tape show, locally produced. Describes: the 7 sources of litter; factors that cause it to spread; areas where it becomes trapped; hazards of litter; actions to control it; benefits of recycling; State Litter Control Program. Good supplement to this instructional guide. 4-6

Contact: Litter Control Program

Auwe! Litter:

8 minutes, color slide and tape show, locally produced. Similar to "Litter! (Junk You Know)" slide show. Good supplement to this instructional guide. 7-12.

Contact: Litter Control Program

The following materials are provided free by the Litter Control Program:

Coloring Sheets:

8 different coloring sheets that have litter control and recycling themes. Can be used to stimulate class discussion. K-3

Decals (State Anti-Litter Symbol):

3 inch size
8 inch size

Posters (the titles are):

Pilau (Junk You Know)
Open For Business
Your Trash Ain't Nothin' But Cash

Brochures:

Are available on topics such as the sources of litter, actions to control litter, recycling, and the State Litter Control Program.

Litter Bags:

Provided for cleanups of public places.

Certificates of Appreciation

Awarded to recognize volunteer efforts in litter control projects.

* * * * *

The materials listed above may be requested from the following organizations by calling the numbers below:

| | |
|---|---|
| Litter Control Program . . . . . | 548-3400 |
| McDonald's of Hawaii . . . . . | 523-2494 |
| The Outdoor Circle . . . . . | 521-0074 |
| Pitch-In! . . . . . | 955-4694 |
| Department of Education Technical Assistance Center . . . . . | 548-6250 |